

TECHNOLOGY DEVELOPMENT AND INNOVATION PROGRAM

(CH-0160)

EXECUTIVE SUMMARY

Borrower: Republic of Chile

Executing agency: Ministry of Economy

Amount and source:	IDB: (OC)	US\$100 million
	Local:	US\$100 million
	Total:	US\$200 million

Financial terms and conditions:	Amortization period:	20 years
	Commitment period:	3.5 years
	Disbursement period:	4 years
	Interest rate:	variable
	Inspection and supervision:	1% of the loan amount
	Credit fee:	0.75% of undisbursed balances
	Currency:	U.S. dollars under the Single Currency Facility

Objectives: The program's general objective is to help increase the competitiveness of the Chilean economy by supporting technological innovation and development in strategic areas of the national economy, and their transfer to and dissemination within the entrepreneurial sector, particularly among small and medium-sized enterprises (SMEs) that produce goods or provide services. Five specific objectives have been set to attain this general objective: (i) identifying and prioritizing the basic focal points for long-term technological and production development in Chile; (ii) accelerating and encouraging the introduction of information and communications technologies in the productive sector in Chile; (iii) promoting increased competitiveness in the forestry, agriculture, and aquaculture sectors through the use of biotechnology in their processes and products; (iv) improving the environmental and productive performance of Chilean businesses, by supporting the development of cleaner production processes; and (v) encouraging Chilean businesses to adopt quality and productivity management systems.

Description:	<p>To attain these objectives, the program will finance research and development (R&D) and technology transfer activities; the training of researchers, experts, and technicians; strengthening science and technology infrastructure and its institutional framework; and disseminating R&D activities within the country's productive sector. Through these activities, and using shared-cost mechanisms, the program is also expected to encourage private investment in science and technology.</p>
The Bank's country and sector strategy:	<p>The operational strategy for the Bank's action in Chile is based, among other considerations, on providing support for innovative projects that promote: (i) the private sector's competitiveness, productivity, and export capacity, particularly on the part of small and medium-sized enterprises; (ii) the modernization and decentralization of the State, and the participation of civil society; (iii) economic and physical integration; and (iv) environmental protection and the conservation of natural resources. This program is also in line with the Bank's science and technology strategy (GN-1913-3) since it will further the process of strengthening institutions in the national innovation system (SNI) as well as businesses, by supporting scientific research and developing and implementing new technologies. The Bank's participation in this program will open up new avenues for developing a joint strategy for the S&T sector, and will create opportunities to share experiences and lessons learned with the other countries in the region.</p>
Environmental and social review:	<p>The program has been designed to help increase competitiveness on a sustainable basis, by trying to avoid or minimize adverse environmental effects. The socioenvironmental dimension was taken into account in preparing all of the program components. The support for the development of cleaner production agreements between companies and the environmental control agency is an innovative aspect of the program, in that it turns the manufacturing sector into an ally of the process of environmental protection. Considering the possibility that some technology development activities may have a potentially adverse environmental impact, specific criteria were incorporated into the Operating Regulations to ensure that, for projects financed under the program, steps are taken to facilitate sound management of natural resources and worker hygiene and safety as well as environmental protection, concerns with labor market reform, and the lack of equal opportunity in gender-related issues. The program will have one gender expert in charge of preparing mechanisms to encourage participation by women and to include gender criteria in progress reports and evaluations. The Committee on Environment and Social Impact (CESI) reviewed this operation on 14 July 2000.</p>

Benefits: The proposed program will assist the country in the process of seeking, procuring, adapting, and disseminating new production and business management technologies, most of which are the responsibility of the State. The emphasis will be on taking advantage of opportunities and eliminating obstacles to technological development and competitiveness. The program takes the training of human resources into account, and is expected to increase women's involvement in the technology sector. Companies are expected to derive the benefits of providing worker training rather than to underinvest in human capital. Shortcomings in product markets will be minimized through technical assistance subsidies directed toward the quality of products, services, management, and distribution. Rather than financing primarily state R&D institutions and laboratories to develop and possibly transfer to society a series of new technologies to be used in the production of goods and services, the program will employ its resources to finance businesses seeking technology, particularly small and medium-sized enterprises, which do not have a significant chance of paying for such spending on their own. The program will also use public bidding or open window systems to support the expansion of the supply of new technological information. Additionally, strategies to improve the environmental performance of manufacturing enterprises will be implemented, using ecoefficiency as a tool for sustainable development. Quality assurance and the use of new information and communications technologies will also be introduced.

Risks: Given the program's demand-based orientation, and the uncertainty involved in the maturation period of research and technological innovation projects, there is a risk that not all the incentives will be applied to projects with the greatest chances of success. Nonetheless, experience in Chile has shown that projects selected for Technology Funds grow more quickly than the average, and that they generate increasing social returns.

Special contractual clauses:

As conditions precedent to the first disbursement of the financing: the borrower must submit, to the Bank's satisfaction: (i) proof that the program's Executive Board (EB) has been formed and is operational, and that the necessary resources have been allocated and key personnel assigned to run it (paragraph 3.5), including the Executive Director, the Chief of Administration and Finance, the Coordinator of each of the five subprograms, and the necessary administrative support; (ii) proof that the program's Operating Regulations (OR) agreed on with the Bank have entered into effect (paragraph 3.16); (iii) proof that performance contracts have entered into effect between the executing agency and the participating organizations: the Corporación de Fomento de la Producción [Production Promotion Corporation] (CORFO), the Consejo Nacional de Investigación Científica y Tecnológica [National Council on Scientific and Technological Research] (CONICYT), and the Fundación para la Innovación Agraria [Agricultural Innovation Foundation] (FIA) (paragraph 3.2); and (iv) the operating plan for the first year of program implementation (paragraph 3.20).

Poverty-targeting and social sector classification:

This operation does not qualify as a project promoting social equality directly and in the short term, as described in the key objectives for the Bank's activities contained in the report on the Eighth General Increase in Resources (document AB-1704).

Exceptions to Bank policy:

None.

Procurement:

The Bank's standard procedures shall apply for the procurement of goods and the hiring of consultants under this program. For public-sector institutions, the procurement of goods in amounts equal to or greater than the equivalent of US\$350,000 and contracting for services in amounts greater than the equivalent of US\$200,000 will be done by means of international competitive bidding. The program does not call for the construction of any public works or new buildings. The program's projects may include financing for small expansions or modifications of existing structures for the installation of hardware at a cost not exceeding 30% of the overall cost of the project subsidy. The procurement of goods and the hiring of consultants by private-sector enterprises will be handled in compliance with the Bank's standards for the private sector. When the procurement involves services of individual consultants in amounts less than the equivalent of US\$50,000, the services of consulting firms in amounts less than the equivalent of US\$100,000, and goods and services valued at less than US\$150,000, the Bank will verify such contracting and procurement by ex-post random sampling.